

REMARKS

Claims 1-5 and 14-29 were pending at the time of the Office action. Claims 4, 5, 18, 22-24, 28 and 29 are rewritten in independent form. Claims 2-5, 22 and 28 have been amended to correct minor clerical errors. Claims 30 and 31 are newly added. No new matter is added. Accordingly, claims 1-5 and 14-31 are pending in the present application.

Objection To The Specification

[TED: please review to verify that the below response to the objection is appropriate]

On page 2 of the Office action, the Examiner alleges that Applicant has improperly incorporated essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication.

Applicant submits herewith a certified copy of Japanese Patent Application No. 2003-356171, from which priority is claimed, and a copy of Japanese Patent Application No. 2001-300375.

Claim Rejections Under 35 U.S.C. 103

On page 2 of the Office action, claims 1-3, 14-17, 19-21 and 25-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki ("Suzuki," U.S. Patent No. 6,169,240).

The rejection is respectfully traversed.

As originally presented, independent claim 1 recites:

A waveform generating device comprising:

storage means for storing waveform data of a chain of a plurality of separated sound components;

performance data input means for inputting performance data;

time compression and expansion percentage acquisition means for acquiring a time compression and an expansion percentage of each of the separated sound components of the waveform data stored in the storage means based on a first series of the performance data; and

waveform generation means for generating new waveform data by compressing and expanding the stored waveform data based on the time compression and the expansion percentage for each of the separated sound components in accordance with a second series of performance data that have been input by the performance data input means. (Emphasis added.)

Applicant is unable to find in Suzuki disclosure or suggestion of the noted features.

First, Suzuki does not disclose or suggest “time compression and expansion percentage acquisition means for acquiring a time compression and an expansion percentage of each of the separated sound components of the waveform data stored in the storage means based on a first series of the performance data,” as recited in claim 1.

Rather, Suzuki discloses using modulating speed information MS as “a basis for generation of data of the stretch/compression ratio SCR.” (Col. 32, lines 23-26.) The “modulating speed information MS is set in accordance with the wheel data stored in register region MH.” (Col. 32, lines 19-20.) (Emphasis added.) The wheel data corresponds to “operating data of the wheel operator.” (Col. 32, lines 10-12.) (Emphasis added.) Suzuki further discloses that the wheel operator may be one of “other performance operators 101B [that] include various types of performance operators such as wheel-type and pedal-type operators and joy stick.” (See FIG. 1 and Col. 16, lines 7-9.)

As explained in the above paragraph, Suzuki teaches generating a stretch/compression ratio SCR using modulating speed information MS that is input via a wheel operator.

Applicant respectfully submits that this teaching does not disclose or suggest “time compression and expansion percentage acquisition means for acquiring a time compression and

an expansion percentage of each of the separated sound components of the waveform data stored in the storage means based on a first series of the performance data,” as recited in claim 1.

Furthermore, Suzuki does not disclose or suggest “waveform generation means for generating new waveform data by compressing and expanding the stored waveform data based on the time compression and the expansion percentage for each of the separated sound components in accordance with a second series of performance data that have been input by the performance data input means[.]” as also recited in claim 1.

On page 3 of the Office action, the Examiner apparently contends that (b) of Suzuki’s FIG. 27 as teaching the above-noted “second series of performance data.” For reasons presented below, Applicant respectfully disagrees with this contention.

The drawings shown in Suzuki’s FIG. 27 are “examples in which the waveform is read out when a slur performance is to be effected.” (Col. 50, lines 41-42.) Specifically, the cited (b) of FIG. 27 shows “another example where no time-axis stretch/compression based on the TSC control is carried out during readout of the slur waveform.” (Col. 50, lines 55-58.) (Emphasis added.) In contrast, (c) of FIG. 27 shows “another example where time-axis compression based on the TSC control is carried out during readout of the slur waveform, while . . . (d) of FIG. 27 [shows] . . . another example where time-axis stretch based on the TSC control is carried out during readout of the slur waveform.” (Col. 50, lines 58-63.) (Emphasis added.)

As described in the above paragraph, (b) of Suzuki’s FIG. 27 shows merely an example of a waveform that is read out when no stretch or compression is carried out. By comparison, (c) and (d) of FIG. 27 show examples of waveforms that are read out when compression and stretch are respectively carried out.

Applicant respectfully submits that the above teaching does not disclose or suggest “waveform generation means for generating new waveform data by compressing and expanding the stored waveform data based on the time compression and the expansion percentage for each

of the separated sound components in accordance with a second series of performance data that have been input by the performance data input means[,]" as also recited in claim 1.

On page 3 of the Office action, the Examiner acknowledges that "Suzuki does not explicitly disclose that the compression and expansion are performed in terms of ratios, not in terms of percentage acquisition as recited in the claims."

At least for this reason and for the reasons presented earlier, it is believed that claim 1 is not unpatentable over Suzuki.

Claims 2 and 3 depend from claim 1. At least for this reason, it is believed that claims 2 and 3 are not unpatentable over Suzuki.

As originally presented, independent claim 14 recites:

A method for generating a waveform comprising:

storing waveform data of a chain of a plurality of separated sound components;

inputting performance data;

acquiring a time compression and an expansion percentage of each of the separated sound components of the waveform data based on a first series of the performance data; and

generating new waveform data by compressing and expanding the stored waveform data based on the time compression and the expansion percentage for each of the separated sound components in accordance with a second series of performance data that have been input. (Emphasis added.)

At least for reasons similar to those presented with respect to independent claim 1, it is believed that independent claim 14 is not unpatentable over Suzuki.

Claims 19-21 depend from claim 14. At least for this reason, it is believed that claims 19-21 are not unpatentable over Suzuki.

As originally presented, independent claim 15 recites:

A method for generating a waveform comprising:

- storing waveform data of a chain of a plurality of separated sound components;
- inputting performance data;
- storing first performance data that have been input;
- detecting a sound production length of second performance data that have been input;
- updating the first performance data based on the sound production length;
- acquiring a time compression and an expansion percentage of each of the separated sound components of waveform data based on the first performance data that have been updated; and
- generating a waveform in conformance with the time compression and the expansion percentage and in accordance with second performance data that are input. (Emphasis added.)

At least for reasons similar to those presented with respect to independent claim 1, it is believed that independent claim 15 is not unpatentable over Suzuki.

As originally presented, independent claim 16 recites:

A waveform generating device comprising:

- a storage device for storing waveform data of a chain of a plurality of separated sound components;
- a performance data input device for inputting performance data ;
- a time compression and expansion percentage acquiring device for acquiring a time compression and an expansion percentage of each of the separated sound components of the waveform data stored in the storage device based on a first series of the performance data; and

a waveform generator for generating new waveform data by compressing and expanding the stored waveform data based on the time compression and the expansion percentage for each of the separated sound components in accordance with a second series of performance data that have been input by the performance data input device. (Emphasis added.)

At least for reasons similar to those presented with respect to independent claim 1, it is believed that independent claim 16 is not unpatentable over Suzuki.

Claims 25-27 depend from claim 16. At least for this reason, it is believed that claims 25-27 are not unpatentable over Suzuki.

As originally presented, independent claim 17 recites:

A waveform generating device comprising:

a waveform data storage device for storing waveform data of a chain of a plurality of separated sound components;

a performance data input device for inputting performance data;

a performance data storage device for storing first performance data that have been input by the performance data input device;

a performance data detection device for detecting a sound production length of second performance data that have been input by the performance data input device;

a performance data updating device for updating the first performance data based on the sound production length;

a time compression and expansion percentage acquisition device for acquiring a time compression and an expansion percentage of each of the separated sound components of waveform data based on the first performance data that have been updated; and

a waveform generator for generating a waveform in conformance with the time compression and the expansion percentage and in accordance with second performance data that are input by the performance data input device. (Emphasis added.)

At least for reasons similar to those presented with respect to independent claim 1, it is believed that independent claim 17 is not unpatentable over Suzuki.

New Claims 30 and 31

New claims 30 and 31 depend from claim 1. At least for this reason, it is believed that claims 30 and 31 are not unpatentable over Suzuki.

Further, claim 30 recites: “. . . wherein the first series of the performance data comprises a plurality of separated sound components corresponding to the separated sound components of the waveform data, and wherein the second series of the performance data comprises a plurality of separated sound components corresponding to the separated sound components of the waveform data.” Support for these features can be found, for example, in FIGs. 4(b) and 4(d) and FIGs. 11(b) and 11(c) of the present application.

Further, claim 31 recites: “. . . wherein the second series of the performance data is input after the first series of the performance data is input.” Support for these features can be found, for example, in paragraph [0041] on page 7 of the present application.

It is believed that each of the features noted above further distinguish the claimed invention over the cited art.

Allowable Subject Matter

Applicant acknowledges the indication on page 4 of the Office action that claims 4, 5, 18, 22-24, 28 and 29 would allowable if rewritten in independent form.

Accordingly, each of claims 4, 5, 18, 22-24, 28 and 29 has been rewritten in independent form. As noted previously, claims 22 and 28 have been amended to correct minor clerical errors.

Concluding Remarks

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

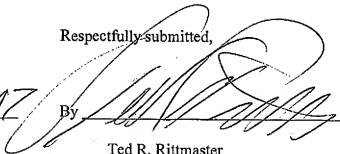
The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

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By



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